Patent Claims

1. A method for producing a rotary joint between a drive element (1, 21) and a flange (2), in which the drive element (1, 21) and the flange (2) are screwed to one another at least by a first nut (22) nut and by a bolt (7, 35) of the drive element (1, 21) at least until the bolt (7, 35) is by rotation of the first nut (22) drawn axially into a hole (5) of the flange (2) as far as an end position of the drive element (1, 21) in relation to the flange (2), the method having the steps

- introduction of the bolt (7, 35) into an axial hole (5) of the flange (2) from one axial side of the flange (2) until a loose screwed joint can be produced between the bolt (7, 35) and the first nut (22), the first nut (22) lying opposite the flange (2) axially on a side of the flange (2) facing away axially from the axial side;
- mounting the first nut (22) onto the bolt (7, 35), and
- screwing the first nut (22) together with the bolt (7, 35) and in so doing drawing the bolt (7, 35) axially into the hole (5) by rotating the first nut (22),

characterized in that the first nut (22) mounted onto the bolt (7, 35) is kept spaced axially in relation to the flange (2) during drawing of the bolt (7, 35) into the hole (5) and in this connection the nut (22) bears against the flange (2) at the earliest when the drive element (1, 21) has occupied

the end position in relation to the flange (2) by virtue of rotation of the first nut (22).

2. The method as claimed in claim 1, characterized in that the first nut (22) is kept spaced axially in relation to the flange (2) until the drive element (1, 21) is located in the end position in relation to the flange (2) and in that the first nut (22) is then screwed together with the bolt (7, 35) until the nut (22) is prestressed axially against the flange (2).

3. The method as claimed in claim 1, characterized in that the first nut (22) is kept spaced axially in relation to the flange (2) until the drive element (1, 21) is located in the end position in relation to the flange (2) and in that the first nut (22) is then first released in the axial direction and finally the first nut (22) is screwed to the bolt (7, 35) until the nut (22) is prestressed axially against the flange (2).

4. The method as claimed in claim 1, characterized in that the first nut (22) is kept spaced axially in relation to the flange (2) until a tightening torque on the nut (22) defined by a first desired value is reached.

5. The method as claimed in claim 1, characterized in that in a further method step the nut (22) is prestressed axially against the flange (2) until a tightening torque on the nut (22) defined by a second desired value is reached.

6. The method as claimed in claim 1, characterized in that

the first nut (22) is kept spaced axially in relation to the flange (2) by means of a device (23).

7. The method as claimed in claim 6, characterized in that the first nut (22) is rotated by means of the device (23) at least until the drive element (1, 21) is located in the end position.

8. The method as claimed in claim 6, characterized in that the first nut (22) is kept spaced axially in relation to the flange (2) by means of the device (23) until a tightening torque on the nut (22) defined by a first desired value is reached and in that the first nut (22) is rotated by means of the device (23) until the first desired value is reached.

9. The method as claimed in claim 8, characterized in that the first nut (22) is screwed together with the bolt (7, 35) by means of the device (23) until the first nut (22) is prestressed axially against the flange (2) and the second desired value is reached.

10. The method as claimed in claim 7, 8 or 9, characterized in that the device (23) is supported at least axially on the flange (2) and is then coupled releasably to the first nut (22), the first nut (22) being supported on the device (23) rotatably relative to the flange (2).

11. Device for assembling a rotationally fixed joint between a drive element (1, 21) and a flange (2), the drive element (1, 21) [lacuna] axially into a hole (5) of the flange (2) at least by rotation of a nut (22) on a bolt (7, 35) of the

drive element (1, 21) [lacuna] screwed to one another by means of the device (23) until the bolt (7, 35) has been drawn into the flange (2) axially into an end position in relation to the flange (2), the device (23) having a rotatable wrench (28) for a rotatable positive connection to the nut (22), characterized in that

- the device (23) has at least one closable clamping lock (27) which can be opened again, the clamping lock (27) surrounding the nut (22) at least radially;
- the clamping lock (27) corresponds at least axially to an axial undercut of the nut (22) facing in the direction of the flange (2), and
- the clamping lock (27) can at the undercut be coupled positively to the nut and released from it again between undercut and flange (2).

12. The device as claimed in claim 11, characterized in that the nut (22) coupled positively to the device (23) is held axially relative to the flange (2) with a spacing of greater than 0 mm and also rotatably relative to the flange (2) in the device (23) and is at the same time supported axially on the flange (2).

13. The device (23) as claimed in claim 11, characterized in that the nut (22) released from the shaped element can be rotated by means of the wrench (28) and at the same time the nut (22) is movably guided axially in the device (23) in the direction of the flange (2).

14. The device (23) as claimed in claim 11, characterized in that the device (23) is coupled in a rotationally fixed manner relative to the flange (2) during assembly of the rotationally fixed joint.

15. A screwed joint for connecting a flange (2) to a drive element (1, 21) of a drive shaft, the drive element (1, 21) and the flange being screwed together at least by a nut (22) and a bolt (7, 35) on the drive element (1, 21), characterized in that the nut (22) is undercut axially at least on a portion from the direction of the flange (2), the portion being spaced axially in relation to the flange (2).

16. The screwed joint as claimed in claim 15, characterized in that the nut (22) is undercut by means of at least one radial recess.

17. The screwed joint as claimed in claim 16, characterized in that the nut (22) is undercut with at least one annular groove (32).

18. The screwed joint as claimed in claim 16, characterized in that the bolt (7, 35) has an external thread (8, 34) and the nut (22) has an internal thread (33) corresponding to the external thread (8, 34), the nut (22) being undercut on an outer side facing away radially from the internal thread (33).